DOCUMENT RESUME

ED 158 266 CS 004 333

AUTHOR Manarino, Priscilla
TITLE An Investigation into the Interrelationships among Linguistic Variables and the Ability to Recover Deep Structure among Second Grade Black Students.
PUB DATE May 78
NOTE 14p.; Paper presented at the Annual Meeting of the International Reading Association (23rd, Houston, Texas, May 1-5, 1978)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Black Dialects; Black Youth; *Deep Structure; Grade 2; *Language Variation; Primary Education; *Reading Comprehension; *Reading Research; Reading Skills; Socioeconomic Status; *Syntax; Word Recognition

ABSTRACT

The ability of primary grade black students to recover deep structure and the degree to which that ability is affected by socioeconomic status, dialect, word recognition, and the child's management of syntactic structures in oral language (oral syntactic control) were investigated in a study involving 125 second grade students. The Deep Structure Recovery Test was administered to determine the subjects' ability to recover deep structure. Oral syntactic control was assessed using the Linguistic Structures Repetition Test. A 50 word list drawn from the tests was used to assess word recognition. Syntactic features indicative of black dialect were used to measure the degree of dialect exhibited by the subjects. Socioeconomic status was determined by the Index of Social Position. The results revealed that oral syntactic control had the greatest direct effect upon deep structure recovery while word recognition had the second greatest direct effect. The greatest indirect effect was dialect. Socioeconomic status had a very small direct effect. The results suggest that reading comprehension programs for black students should focus on children's management of syntactic structure and on word recognition. Further, educators should become more knowledgeable about black dialect. (FL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED158266

AN INVESTIGATION INTO THE INTERRELATIONSHIPS AMONG LINGUISTIC VARIABLES AND THE ABILITY TO RECOVER DEEP STRUCTURE AMONG SECOND GRADE BLACK STUDENTS

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

by

Priscilla Manarino
Assistant Professor
Reading Education
West Virginia College of Graduate Studies
Institute, West Virginia

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Priscilla Manarino

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

Paper presented at the International Reading Association Annual Convention
Houston, Texas, May 5, 1978

CS004333

Acknowledgments

This paper is based on a dissertation presented to the Education Faculty in the College of Education of the University of South Florida in partial fulfillment of the requirements of the Doctor of Philosophy degree. The author is indebted to her advisor, Dr. Donald Neville, for guidance and support.

An Investigation Into The Interrelationships Among Linguistic Variables And The Ability to Recover Deep Structure Among Second Grade Black Students

Recently, psycholinguistic and sociolinguistic theories were formulated and research conducted attempting to apply linguistic knowledge to an analysis of the reading process. The psycholinguistic model of the reading process proposed that reading is a psycholinguistic response to written language, that is, an interaction of language and thought (Goodman, 1970). The skilled reader engages in highly selective sampling of visual data and combines this initial data with knowledge of the semantic, syntactic, and phonological constraints of his oral and written language in order to construct hypotheses as to the meaning of large units. Skilled readers need only a minimum of clues from the surface structure to arrive at deep structure. However, for a child who is in the beginning stages of the reading process, the task is at first slow and arduous because he does not have the stored information that enables him to generate hypotheses about the meaning. The visual data can be related only to that which is most familiar, namely, his knowledge of oral language. Therefore, competence with oral language is a major and important variable in the reading process. The focus of this study was on one component of language, syntax. For purposes of this study, the child's management of syntactic structures in oral language was referred to as oral syntactic control. Simply, it is the degree to which syntax of the language is developed within the child's oral language.

It is precisely this notion of oral language which caused some sociolinguists to advance a theory proposing to account for the low reading achievement of many black children, namely, the presence of an interference effect of their dialect which deviates from standard English (Baratz, 1969). This hypothesis suggests that speakers of nonstandard English find learning

to read more difficult because of the phonological syntactic, and semantic differences in oral language.

Background

Linguistic competence has been linked to success in reading. The pioneering work of Loban (1963), McCarthy (1954), Strickland (1962) and Templin (1957) demonstrated that language fluency and control over syntactic features were significantly related to reading achievement. Contribution of and dependence upon knowledge of grammatical structure was evidenced by the oral reading and silent reading performances of students (Calvert, 1971 ; Hamilton and Deese, 1971; Ruddell, 1965; Tatham, 1970, and Weber, 1970). Recent research revealed the relative importance of syntactic abilities in the reading process, specifically reading comprehension. These studies suggested that facility with language and one's control over features of language were necessary in order to process written language. More importantly, the role of syntax, both in oral and written language, was a unique factor in the comprehension process. Thus, one aspect research demonstrated was that, in order to comprehend a sentence, the readers must be able to arrive at the underlying structural relationships. To do this, the reader relies heavily upon his knowledge of syntax of the language as he knows it.

From the sociolinguistic perspective there were studies which found specific syntactic differences in the ways in which black children manipulate linguistic structures (Golub, 1974). These specific differences were used by some as evidence of the possibility of an interference effect when black students were faced with the task of reading standard English (Baratz, 1968). The research, however, is not conclusive as to what effect black dialect has upon the reading process.

Problem

An attempt was made to weave both the psycholinguistic and sociolinguistic theories into a framework for investigation. In an attempt to explain the ability of primary grade black students to recover deep structure (DSR) a theoretical causal model was formulated. This model proposed to explain the interrelationships among black dialect, oral syntactic control and two other correlates of reading, socioeconomic status and word recognition. (See Figure 1.)

The specific questions under investigation were: (1) What effect does oral syntactic control have upon the ability to recover deep structure (DSR)? (2) What effect does black dialect have upon this dependent variable (DSR)? (3) What effect does word recognition and socioeconomic status have upon the ability to recover deep structure?

Procedures and Methodology

Assessment of the Variable

The Deep Structure Recovery Test (D.S.R.T.) developed by Simons (1970) was used to assess the students' ability to recover deep structure. The test consisted of 25 items. Each item consisted of three sentences; two were similar in underlying meaning and the other, although similar in surface structure to one of the other two, was different in underlying meaning. The task was to select the sentence that was different in underlying meaning.

Oral syntactic control was assessed using the Linguistic Structures Repetition Test (Fisher, 1972). The test included 36 sentences, assessing 15 different linguistic structures. The task was to have the student repeat the stimulus sentence after he heard it.

The syntactic differences indicative of black dialect cited by

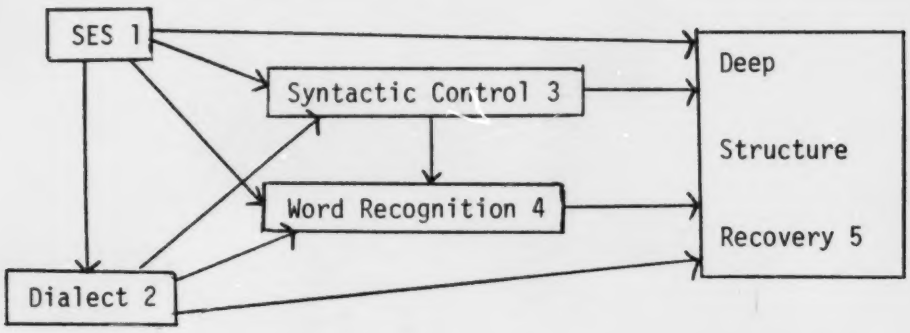

Figure 1. Causal Model with the five variable under study.

Baratz (1968,1969) were used to assess the degree of black dialect exhibited during the subjects' repetitions.

A list of 50 words, composed of the vocabulary used on the D.S.R.T. was used to assess word recognition. The subjects were shown the words individually and at random. The response time allowed for each word was five seconds.

The Index of Social Position (Hollingshead and Redlich, 1958) was used to determine socioeconomic level.

Training of Recorders

Four assistants helped collect the necessary data. All were trained in the proper administration and recording procedures to be used for the L.S.R.T., black dialect, and word recognition assessments. Four trial tapes were prepared. At least 90% agreement on each item was necessary before the next was used. The final tape required 95% agreement. The criterion level was reached by all recorders.

Subjects

One-hundred twenty-five students were randomly selected from the black second grade population in a large metropolitan school district in Florida.

Results

The zero-order correlations were calculated between each of the variables in the model and a regression analysis program from the Statistical Packages for the Social Sciences was used to estimate the path coefficients, which depicted the direct effects of each of the variables upon each other in the model. The causal model with the corresponding path coefficients is reproduced in Figure 2.

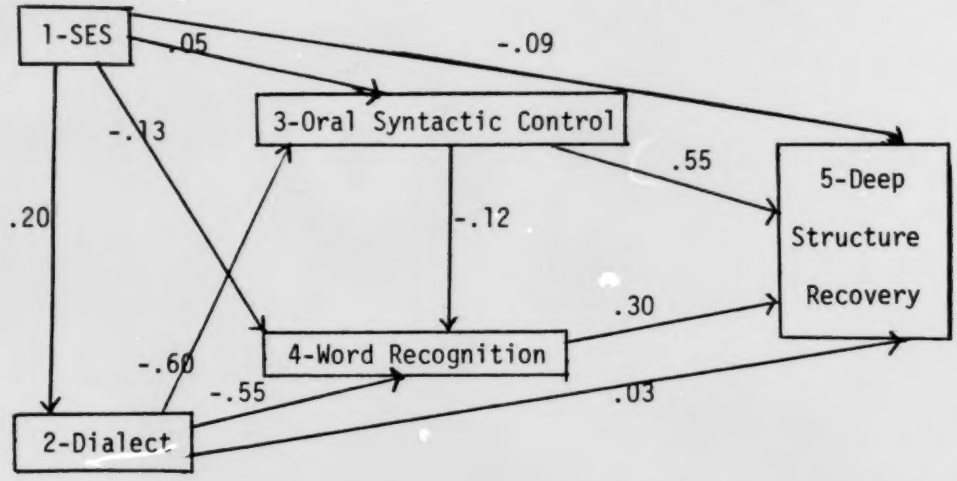

Figure 2. Path model with obtained path coefficients.

Table 1 includes the values of the path coefficients, representing the direct effects of each independent variable upon the various dependent variables. Also included are the total effects, or the zero-order correlation coefficients, the total indirect effects, and the multiple correlation coefficient.

Summary of the Path Analysis Results

The path analysis technique revealed the following:

1. Of the four independent variables under investigation, oral syntactic control had the greatest positive direct effect on deep structure recovery.

2. Word recognition had a positive direct effect on deep structure recovery.

3. Dialect had a greater indirect effect upon the ability to recover deep structure than a direct effect.

4. Socioeconomic status had a small but direct effect upon the ability to recover deep structure.

Theory Testing

Based upon Kerlinger and Pedhazur's (1973) "criterion of meaningfulness" those path coefficients whose value was less than .05 were eliminated and new path coefficients were estimated. The more parsimonious model was tested to determine if it did an equally good job explaining the shared variance among the variables. After the original and reproduced correlation matrices were compared it was revealed that the original model was preferred over the trimmed model.

Table 1

Multiple Correlation Coefficient,
Standardized Path Coefficients, Total Effects,
and Indirect Effects for Variables in the Model

Dependent Variable	Independent Variable	Multiple Coefficient	Total Effects	Path Coefficient	Total Indirect Effect
Deep Structure Recovery	S.E.S.	.68	-.19	-.09	-.10
	Dialect		-.46	.03	-.49
	Oral Syntactic Control		.60	.55	.05
	Word Recognition		.42	.30	.12
Word Recognition	S.E.S.	.53	-.23	-.13	-.10
	Dialect		-.50	-.55	.05
	Oral Syntactic Control		.21	-.12	.33
Oral Syntactic Control	S.E.S.	.59	-.07	.05	-.12
	Dialect		-.59	-.60	.01
Dialect	S.E.S.	.20	.20	.20	0

Recommendations

Based on this investigation it was suggested that: (1) attempts to develop comprehension should focus on the improvement of children's management of syntactic structures; (2) focusing on syntax in both speaking and reading would allow students the opportunity to develop various strategies; (3) word recognition should remain a part of the total reading language arts program; (4) educators need to be knowledgeable about black dialect and specific features which may indeed, interfere, indirectly with the reading process; and (5) since socioeconomic status had a small direct effect, focus should be upon the more immediate variables, namely, oral syntactic control and word recognition.

REFERENCES

Baratz, J.C. A bidialectal task for determining proficiency, 1968. (ERIC Document Reproduction Service No. ED 020 369)

Baratz, J.D. Teaching reading in an urban school system. In J. Baratz & R.W. Shuy (Eds.), Teaching Black children to Read, Washington, D.C.: Center for Applied Linguistics, 1969.

Calvert, K.C. An investigation of the relationships between syntactic maturity of oral language and reading comprehension scores. (Doctoral Dissertation, University of Alabama, 1971). Dissertation Abstracts International, 1972, 32, 4828A. (University Microfilms No. 72-8416)

Fisher, C. Linguistic Structures Repetition Test, 1972. (ERIC Document Reproduction Service No. ED 091 746)

Golub, L. English syntax of black, white, Indian and Spanish American children. Elementary School Journal, 1974, 75, 323-334,

Goodman, K. Reading: A psycholinguistic guessing game. In H. Singer & R. Ruddell (Eds.), Theoretical models and processes of reading, Newark, Delaware: International Reading Association, 1970.

Hamilton, H. & Deese, J. Gramatical structures as determiner of comprehensibility. Journal of Verbal Learning, 1971, 10, 163-170.

Hollingshead, A.B. & Redlich, F.C. Social class and mental illness, New York: John Wiley, 1958, 387-397.

Kerlinger, F.N. & Pedhazur, E.J. Multiple regression in behavioral research. New York: Holt, Rinehart and Winston, 1973.

Loban, W.D. The Language of elementary school children. N.C.T.E. Research Report No. 1, Champaign, Illinois, 1963.

McCarthy, D. Language development in children. In L. Carmichael (Ed.), Manual of Child psychology, New York: John Wiley & Sons, 1954.

Ruddell, R.B. The effect of the similarity of oral and written patterns of language structures on reading comprehension. Elementary English, 1965, 42, 403-410

Simons, H.D. Deep structure recovery test, 1970. (ERIC Document Reproduction Service No. Ed 091 727)

Strickland, R. The language of elementary school children. Bulletin of the School of Education, Indiana University, No. 4, 1962.

Tatham, S.M. Reading comprehension of materials written with select oral language patterns: A study at grades 2 and 4. Reading Research Quarterly, 1970 5, 402-425

Templin, R. Certain language skills in children: Their development and inter-relationships. Minneapolis, Minn: The University of Minnesota Press, 1957.

Weber, R.M. A linguistic analysis of first grade reading errors. Reading Research Quartly, 1970, 4, 96-119.